

PVC GRAVITY PIPE SEWER for SERVICE
LATERALS AND ON LOT CONNECTION

ITEM 1400-A

PART 1 - GENERAL

WORK INCLUDED: (Sec. 01) Furnish and install PVC gravity pipe sewer and fittings as indicated on the Drawings and specified.

DESCRIPTION: (Sec. 02) Work in this Item consists generally of excavating for, and the proper installation of, PVC gravity service sewer pipe, fittings, testing the installation and associated work.

QUALITY ASSURANCE: (Sec. 03) Materials shall be new and of their best quality.

Materials shall be subject to inspection and approval upon delivery to job site.

REFERENCES: (Sec. 04)

ASTM - American Society for Testing and Materials

ODOT - Ohio Department of Transportation

SUBMITTALS: (Sec. 05) Shop Drawings - Provide to the Village Inspector two sets for record purposes only. Include pipe material, dimensions, joint/gasket details and certification that materials conform to current, applicable standards.

DELIVERY, STORAGE, HANDLING: (Sec. 06) Methods of handling, unloading and storage of pipe and fittings shall be in accordance with manufacturer's recommendations.

PART 2 - PRODUCTS

MATERIALS: (Sec. 07) Pipe and fittings 4 inches through 6 inches diameter shall be solid wall ASTM Specification D-3034 SDR-35

Pipe shall be furnished in standard manufactured lengths. Each length of pipe shall be marked with manufacturer's name, nominal diameter, and "home" mark on the spigot end to indicate when the pipe is inserted to the "home" position.

Joints shall be push-on type, with an elastomeric ring gasket compressed in an annular space between a bell end and spigot end of pipe, conforming to ASTM D-3212.

Elastomeric ring gaskets shall conform to ASTM F-477 for low head application.

Bedding material shall be Class 1-A material as per ASTM D-2321 and placed 12" over the top of the pipe.

PART 3 – EXECUTION

INSPECTION: (Sec. 08) The Village shall be notified no less than 72 hours prior to the installation of the service lateral. The Village shall inspect the installation and testing of each service lateral. Any service lateral installed without the approval of the Village inspector will not be accepted.

INSTALLATION: (Sec. 09) Pipe and fittings shall be installed per ASTM D-2321 "Underground Installation of Flexible Thermoplastic Sewer Pipe".

Use laser beam for establishing line and grade. The method used shall be as recommended by the manufacturer of the laser equipment and must be satisfactory to the Village Inspector. The laser beam shall not be of greater power than 2.5 milliwatts (0.0025). A continual visual check shall be provided by the laser equipment.

The contractor shall not deviate from the required minimum line of grade (0.62%) without the written consent of the Consulting Engineer.

No pipe shall be laid until a sufficient length of trench as been properly prepared to permit laying at least one standard length of pipe at one time.

Excavate and backfill within the measurement limits indicated on the Drawings. Install pipe in well compacted bedding material, placed on undisturbed earth or well compacted foundation material. Uniformly support pipe throughout its length except for the bell holes required for the proper installation of the joints. The ends or shoulder of each pipe shall abut against the adjacent pipe in such manner that there will be not unevenness along the inverts.

Pipe shall not be laid in water or on frozen trench bottom or, when in the opinion of the Village Inspector, trench conditions or weather are unsuitable for such work.

Pipe delivered for installation shall be strung so as to minimize the entrance of foreign material. At the end of the day, and at such other times that work is not in progress, all openings in the pipe line shall be plugged. Joints of all pipe in the trench shall be completed before work is stopped. If water accumulates in the trench, the plugs shall remain in place until the trench is dewatered.

Service Sewer: House service sewers shall be 4 inches in diameter unless specifically shown or called for as a different size.

Each Y branch be placed by the sewer contractor shall be marked by a 4" x 4" wye pole, and marked with a ¾" steel rebar, buried no less than 6" below grade at the end location.

Each standard service sewer shall consist of all earth excavation and backfill, granular bedding material, furnishing and installing all straight and curved pipe at the grade determined by the Village Inspector, (0.62% min.) from the Y branch or service stack or Grinder Pump to the soil pipe at the building, unless otherwise indicated on the Drawings, or to the point of reconnection to an existing service sewer. Included shall be all joint materials, adapters, stoppers, location markers, restoration, testing and clean-up.

The contractor or property owner shall have each septic tank pumped by a qualified pumping contractor. The existing septic tank shall have the bottom broken out and be demolished. The excavation shall be filled with Granular Backfill (item 164).

Abandoning Existing Sewers and Septic Systems: Where existing sewer lines and septic systems are to be abandoned, all broken pipe within the excavation limits of the new construction shall be removed to permit proper placement of bedding and new pipe.

FIELD QUALITY CONTROL: (Sec. 10)

Field Testing: Upon completion of service lateral installations, the Contractor shall be responsible for testing the pipe.

Test shall be low pressure air test in accordance with the Item for Testing of Sanitary Sewer Services (Item 1600 A).

CLEAN-UP: (Sec. 11)

Clean-up of Site: Remove all surplus excavation, pipe, broken concrete, stones, and miscellaneous debris and dispose of off the site. Grading providing drainage shall be included.

The clean-up and disposal of the cleared materials shall be done as soon as practical after laying of the sewer pipe and as the Village Inspector may direct.

Payment Method (Sec. 12)

Payment shall be as indicated on the drawings and through Bid Documents.